

ABSTRACT

To provide an interface apparatus capable of achieving noncontact and unrestricted arm pointing actions of multiple users in an indoor space, and facilitating the recognition of all typical arm pointing actions in standing, sitting, and lying postures and the operation of indoor units in the indoor space by the arm pointing actions. The interface apparatus includes: image processing means for picking up images of the interior of an indoor space 5 with a plurality of stereo cameras 1-1 to 1-n, and producing a distance image based on the picked-up images within the visual field on a camera-by-camera basis and the coordinate system of the indoor space 5; means for extracting the posture and arm pointing of a user 4 from the distance information from the stereo cameras 1-1 to 1-n; and means for determining, when the arm pointing has been identified, whether the arm pointing is an intended signal, from the direction pointed by the arm and the motion of the arm.